

Integrating Nutritional and Family Planning Education With Food Services in Korean Day Care Centers — An Evaluation —

KYU-TAIK SUNG, MSW, PhD

VARIOUS PROGRAMS TO IMPROVE THE NUTRITION of preschool children have been established in Korea. One is the Integrated Day Care Program (IDCP), which combines the feeding of preschool children from low-income families with nutritional and family planning education for the mothers. The IDCP, the first child care program of this kind to be introduced into a developing country in Asia, was initiated in 1973 by CARE with the support of the Republic of Korea.

Impetus for Integrated Program

The negative effects of frequent childbirth and unwanted pregnancies on the health and well-being of children and mothers have been reported many times. Large family size and short intervals between births are associated with higher prematurity rates, less parental care, more limited educational aspirations on the part of parents for their children, a greater likelihood of child abuse, an increasing inci-

dence of infectious diseases in both parents and children, lower IQ scores for children, and an increased prevalence of selected diseases among parents (1). Unwanted pregnancies may produce such problems as spontaneous abortion; toxemia of pregnancy, labor, and delivery; emotional illness associated with birth; marital friction; and divorce (1). The unwanted child may be rejected, and in extreme cases, physically abused or even abandoned by a parent (2). These negative effects of large families are particularly substantial for low-income families and families in rural areas, where access to good prenatal, obstetrical, and pediatric care is likely to be limited. As Wray reported (3), the poor economic and social conditions under which these two groups of families often live accentuates the effects of malnutrition.

One of the most powerful inducements for having smaller families is declining child mortality, to which better nutrition can make a major contribution. As the confidence of parents in the chances of their children's survival rises, their need for additional children declines. Scrimshaw (4) reported that adequate nutrition had been shown to be the most effective means of reducing deaths among infants and young children. Thus, the success of efforts to promote well-being and limit family size in under-

□ *Dr. Sung was formerly a research consultant to CARE-Korea and the Korean Institute of Family Planning. Tearsheet requests to Dr. Kyu-Taik Sung, Research Associate, Social Work Education & Population Planning Project, School of Social Work, University of Michigan, Ann Arbor 48104.*

privileged populations depends at least as much on improving the nutrition of children as on making sophisticated techniques available for contraception. Day care for low-income families therefore needs to combine such mutually reinforcing services as supplemental feeding and nutritional and family planning education. It was with this need in mind that the IDCP was established. Its nutritional component acts as a significant incentive for family planning, because efforts to space childbirths and reduce unwanted pregnancies are directly linked with measures to improve the health of children already born—such as the provision of supplemental food to raise these children's nutritional levels.

Organization and Operation of IDCP

CARE is responsible for the planning and administration of the Integrated Day Care Program, the Government of Korea provides a grain subsidy, and the World Food Program of the United Nations (WFP-UN) supplies food commodities. The participating day care centers offer the children attending them lunches and snacks every day except Sunday. The individual daily ration consists of the government grain (141 gm of a mix of barley and rice) and the following WFP commodities:

Commodity	Quantity (gm)	Calories	Protein (gm)
Wheat flour	150	522	15
Cornmeal-soybean mix or corn- soybean mix	50	262	14
Edible oil	25	221	0

Day care centers not participating in the IDCP also provide a lunch for the children attending the centers, but generally on an irregular basis, and the food is often insufficient and of poor quality. All day care centers in Korea are privately owned. In line with government policy, they accept fees for day care services on a sliding scale based on the family's income. This policy is designed to provide children from low-income families with food, protection, and preschool training. All centers, whether or not they participate in the IDCP, also receive a government grain subsidy.

The total cost of IDCP for fiscal year 1975 was \$796,446, with which approximately 44,700 persons (30,000 children and 14,700 mothers) were served. Without differentiation as to type of service, the per capita cost of the program in that fiscal year was about \$17.82, the equivalent cost of a pair of shoes in Korea. The sources of funds and other contributions for the Integrated Day Care Program for fiscal year 1975 and their value were as follows:

Korean Government:	
Funds for personnel and operations	\$168,346
Grain subsidies	61,200
Cash subsidies	61,200
CARE:	
Funds for personnel and operations (including salaries for 2 CARE representatives	112,200
Equipment and materials	23,500
World Food Plan-United Nations: food commodities	370,000
Total	\$796,446

Goals of IDCP Program

Representatives of the Korean Government, CARE, and the day care centers defined the immediate goals for the three IDCP services as follows:

Food services:

1. To provide food services acceptable to the mothers
2. To contribute to the normal growth of the children

Nutrition education:

1. To increase mothers' knowledge of nutrition
2. To help mothers put their knowledge of nutrition into practice

Family planning education:

1. To increase mothers' knowledge of family planning and instill in them a favorable attitude toward family planning
2. To influence mothers to practice family planning

Services Provided

To promote the sound growth of preschool children—a group in Korea likely to be malnourished—children in the IDCP are provided lunch and snacks 6 days a week. Nutrition education is also offered to the mothers of these children, with a view to promoting better care not only for the preschool children but also for other members of their families. The mothers are taught about nutrition by classroom discussion, demonstration, and practice. Emphasis is placed on the relationship between foods and nutrients, the balancing of nutrients, appropriate use of milk and baby foods, weaning, and the necessity of sanitation. Family planning education is offered the mothers to win acceptance for family planning and to induce them to accept referrals to family planning clinics. (At such clinics, besides learning about contraceptive methods, the women can from time to time obtain contraceptive materials.) In short, the IDCP's educational services seek to help couples make informed decisions about how to plan for and raise their children.

In 1975, approximately 14,700 mothers attended the IDCP nutrition and family planning classes.



The Korean Government supplies trained supervisors for day care nurseries in the low-income areas of Seoul. CARE food assures that the children attending these nurseries will have at least one substantial meal a day

These classes are as informal as possible and scheduled so as to fit conveniently into a mother's free time. They meet once a month except for 1 month in winter and 1 in summer. The 11 instructors, all women, who are government-licensed nutritionists, are also family planning workers who have been trained at the Korean Institute of Family Planning. Each instructor is responsible for one Province of the country.

Study Method

After the first 2 years of operation of the Integrated Day Care Program, a review was undertaken to determine (a) whether the program enjoyed continuing acceptance; (b) whether favorable changes had taken place in respect to four items of particular concern to the program's planners—child's weight, mother's assessment of child's health, age of child when working mother began giving the child baby food supplemented with milk, and the mother's practice of family planning; and (c) finally, whether the direction of the program should be adjusted.

One instrument used in this assessment was a questionnaire of about 24 items, with both open-ended

and multiple-choice queries such as the following:

1. How satisfied are you with the quality of food served to your child at this day care center?

I am: _____ very satisfied; _____ satisfied; _____ not very satisfied; _____ not satisfied at all.

2. Please circle all correct answers given in the following:
.....

[Respondents were given 6 correct choices, and 5-6 answers were rated very good; 3-4 answers, good; 1-2 answers rather poor; and no correct answer, very poor.]

After the questionnaire was pilot-tested at three IDCP day care centers, it was administered by the research team to mothers at 30 other IDCP centers and 15 non-IDCP centers throughout the country. Special care was taken to preserve the anonymity of the respondents and the confidentiality of their answers.

The arithmetic mean was used to summarize the responses of mothers to a particular item in the questionnaire; the combined means of several items were tabulated to derive the mean score of a criterion. For the most desirable reply to an item on the questionnaire, a score of 4 was assigned and for the least desirable reply, a score of 1.

Another step that was taken to measure the progress of IDCP toward its goals was confined to the participating centers. This measure was a comparison of the four items of particular concern to IDCP planners (mentioned at the beginning of this section) based on data from a 1973 survey (5) and data from the 1975 study.

To compare IDCP centers with non-IDCP centers and to compare IDCP centers over time, data were collected by physical examinations, nutrition surveys, field observation, and from records of the day care centers, as well as by the questionnaire.

In selecting the criteria for the four items and constructing the indicators used to measure the progress of IDCP toward its goals, the directors and instructors of the day care centers and I were aided by outside experts. The opinions of physicians and other specialists were taken into consideration in determining how much weight should be given to a certain item, such as, for example, frequency of illness or length of practice of family planning.

Study Sample

The study groups consisted of a national sample of 30 day care centers taken at random from the 301 that had participated in the IDCP for 2 years (that is, had provided the three services offered in the Integrated Day Care Program) and of another 15 day care centers taken at random from the 200 centers not participating during the 2 years. The sample comprised about 9 percent of the day care centers operating in Korea in 1975. Half of those in each group were located in urban areas and half in rural areas. Participating and nonparticipating centers were matched according to the quality of their facilities (including their buildings, heating equipment, learning aids, kitchens, and storerooms—all of which were found to be fairly good), ratio of staff to children (average was 1 to 17), the staff's training (all staff members had been professionally trained).

In both groups of centers, 87 percent of the children were from 4 to 6 years old. The mothers in both groups had similar characteristics: 86 percent were from 26 to 40 years old, their monthly family income was under \$200, and 51 percent were employed. The difference between the two groups in each characteristic was less than 4 percent.

Results

Analysis of the results of the 1975 survey of the IDCP day care centers and of centers not participating in the IDCP revealed consistent differences in favor of the IDCP centers. A separate comparison, confined

to participating centers, of certain data from the 1975 survey with corresponding data from a survey in 1973 indicated that the IDCP was making progress in meetings its goals.

Acceptability of food service. The main difference between the two groups of day care centers was in their food service. Ratings of the food service based on mothers' responses to the questionnaire showed that compared with nonparticipating centers, the participating centers provided better quality food, more satisfactory service, prepared foods more carefully, and with cleaner dishes, pots and pans, and cooking facilities. The following table shows the mean scores for acceptability of the food service to the mothers (for explanation of scores, see Study Method):

Indicators	Participating centers (N=1,029)		Nonparticipating centers (N=459)	
	Mean score	Standard deviation	Mean score	Standard deviation
Quality of food	3.54	0.62	2.47	0.95
Preparation and cleanliness	3.82	0.42	2.86	0.77
Satisfaction with the service	3.52	0.58	2.44	0.75

Physical condition and health of children. The children's physical condition and frequency of illness, based on the mothers' reports, were rated as follows:

Indicators	Participating centers (N=1,029)		Nonparticipating centers (N=459)	
	Mean score	Standard deviation	Mean score	Standard deviation
General physical condition	3.33	0.71	2.82	0.74
Frequency of illness ...	3.44	0.67	2.89	0.71

Table 1 shows the mean amounts of nutrients that children at the participating and nonparticipating centers received from the lunch and snacks served. Participating children far exceeded nonparticipating children in the amount of intake of every nutrient listed regardless of whether they lived in an urban or rural area. Nevertheless, the rural centers, whether or not they participated in the IDCP, provided less nutritious foods than the urban centers.

The average calorie intake from the lunch and snacks served participating children is clearly one-third above the safety level recommended by the Food and Agriculture Organization and World Health Organization (6)—see footnote 2, table 1.

Table 2 presents the heights and weights of the 1,651 children in the current study who were 4-6

years old in 1975. (These children comprised 87 per cent of the total 1,900 children under study. The range in ages for the total 1,900 was 2 through 7 years.) The mean scores for height and weight for the age group 4 through 6 years from the participating centers exceeded the scores for the corresponding age group from the nonparticipating centers. The gross mean weight for the IDCP children was 17.08 kg, which is slightly better than the 17.0 kg recommended by the Food and Agriculture Organization-Korea in 1974. The gross mean weight of nonparticipating children 4-6 years was below this standard, 16.53 kg.

According to the records of the day care centers, the number of children 4-6 years who had died of various diseases in the 2-year period preceding the 1975 survey was 1.9 per 1,000 for participating chil-

dren and 2.1 for nonparticipating. Mortality rates for the 4-6 year age group were not available for this 2-year period, but the latest available rate for the 1-4 year age group was 2.9 per 1,000, and for the 5-9 year age group, 2.2 (7). The number of deaths of rural children in the 2-year period was higher than of urban children—2.4 per 1,000 versus 1.6.

Mothers' knowledge and practice of nutrition. Mothers from the participating centers demonstrated distinctly better knowledge of the importance of giving children milk and about weaning, nutrients, and proper food for babies, patients, and pregnant women than did nonparticipating mothers. The first table on page 182 shows the mean scores for the women on nutrition knowledge.

Table 1. Mean nutritional intake from meals served children at participating and nonparticipating day care centers in urban and rural areas, 1975

Nutrient intake ¹	Participating centers						Nonparticipating centers					
	All (N=30)		Urban (N=15)		Rural (N=15)		All (N=15)		Urban (N=7)		Rural (N=8)	
Calories (kcal) ²	666	(112)	699	(111)	628	(105)	463	(69)	470	(47)	457	(88)
Carbohydrates (gm)	108	(22)	115	(22)	100	(20)	79	(22)	84	(10)	74	(29)
Protein (gm) ²	24	(5)	25	(5)	23	(5)	15	(5)	16	(5)	15	(3)
Animal protein (gm) . . . . .	...	(5)	...	(5)	...	(4)	...	(4)	...	(5)	...	(3)
Fat (gm)	6	(4)	6	(4)	6	(4)	5	(4)	6	(4)	3	(4)

¹ Nutritional intake was determined on the basis of lunches and snacks served during 1 week of 6 days (Sunday excluded since no meals provided).

nutritional requirements for children 4-6 years of age were 1,830 calories (Kcal) and 20 gm protein (6).

NOTE: Scores in parentheses are standard deviations.

² Food and Agriculture Organization-World Health Organization daily

Table 2. Mean height and weight of children 4, 5, and 6 years old in participating and nonparticipating day care centers, 1975

Age (years)	Participating centers			Nonparticipating centers			Both kinds of centers		
	Number of children ¹	Height (cm)	Weight (kg)	Number of children ¹	Height (cm)	Weight (kg)	Number of children	Height (cm)	Weight (kg)
4	158	98.8	15.6	101	96.2	15.0	259	97.8	15.4
. . . . .	...	(5.0)	(1.8)	...	(7.9)	(2.1)	.....	.....	.....
5	411	105.8	17.1	173	103.4	16.4	584	105.1	16.9
. . . . .	...	(4.9)	(2.7)	...	(9.6)	(2.0)	.....	.....	.....
6	578	109.7	18.5	230	108.1	18.1	808	109.2	18.4
. . . . .	...	(5.0)	(1.8)	...	(5.5)	(5.0)	.....	.....	.....
Total . . . 1,147 . . . . .	.....	.....	.....	504 . . . . .	.....	.....	² 1,651 . . . . .	.....	.....

¹ The number of boys and girls in each age group was equal.

² 87 percent of the 1,900 children under study.

NOTE: Figures in parentheses are standard deviations.

Indicators	Participating centers (N=1,029)		Nonparticipating centers (N=459)	
	Mean Score	Standard deviation	Mean score	Standard deviation
Use of milk	3.52	0.68	2.79	0.91
Use of baby foods	3.74	0.56	2.28	0.92
Weaning	3.71	0.48	3.19	0.77
Roles of nutrients	3.57	0.78	2.21	1.13
Nutrients in various foods	3.71	0.71	2.76	1.16
Food for pregnant women and patients..	3.46	0.90	2.52	1.09

Participating mothers also put their knowledge of nutrients and foods into practice more successfully than nonparticipating mothers, as their mean scores for the practice of nutrition show:

Indicators	Participating centers (N=1,029)		Nonparticipating centers (N=459)	
	Mean Score	Standard deviation	Mean score	Standard deviation
Way mother prepared baby food	3.28	0.67	2.69	1.12
Way baby food was given	3.39	0.92	2.76	0.99
Balancing of nutrients..	3.89	0.62	2.36	0.76
Balancing of foods	3.60	0.97	2.55	1.95
Serving of side dishes..	3.42	0.80	2.97	0.83

Fifty-eight percent of the participating working mothers started feeding their babies milk supplemented with baby foods on an average of 6 months after the child's birth, as was recommended by the nutrition instructors. Only 22 percent of nonparticipating

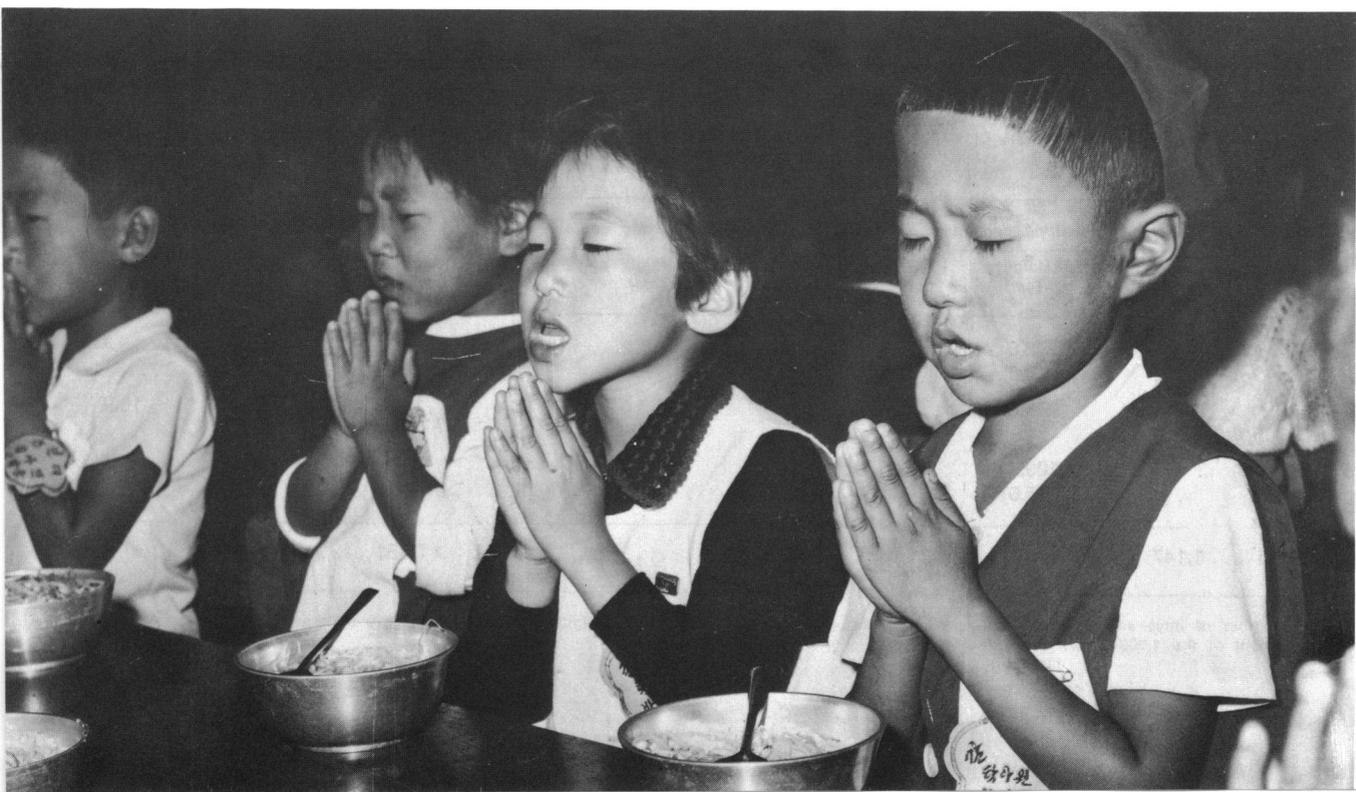
mothers followed this plan. The mean scores suggest that participating mothers who were employed were better able to adjust to their employment situation while weaning their babies within a nutritionally permissible range of foods than were the nonparticipating mothers who worked. Participating mothers also served their children more nutritionally balanced foods than did the nonparticipating mothers.

Knowledge of, attitudes toward, and practice of family planning. The mothers from the participating centers evidenced a better understanding of the purpose of family planning, supported it more positively, and indicated more reasons for this support than did nonparticipating mothers. The mothers' mean scores for family planning knowledge and attitudes were as follows:

Indicators	Participating centers (N=1,029)		Nonparticipating centers (N=459)	
	Mean Score	Standard deviation	Mean score	Standard deviation
Purpose of family planning	3.57	0.53	3.16	0.66
Reasons to support family planning	3.33	0.67	1.93	0.63
Willingness to practice family planning	3.57	0.52	3.30	1.06
Extent to which male child is preferred ...	3.00	0.93	2.73	1.01

A major factor hindering family planning in Korea

At a day care nursery in Seoul, Korea, children of poor working mothers give thanks before they eat food that CARE has provided.



is the preference for boy babies. Many Koreans still consider sons to be insurance for care in old age. Thus, a family will continue to have children until there is at least one male child. Sixty-one percent of the participating mothers, compared with 40 percent of the nonparticipating, indicated that they "would not prefer a boy if my ideal number of children happened to be girls." Seventy-four percent of the participating mothers had been informed about family planning by IDCP instructors and IDCP pamphlets. The number of mothers who were informed was greater in rural than in urban areas. This result reflects the stronger emphasis that IDCP placed on its services to mothers in rural areas.

Scores for the participating and nonparticipating mothers on the practice of family planning were as follows:

Indicators	Participating centers (N=1,029)		Nonparticipating centers (N=459)	
	Mean Score	Standard deviation	Mean score	Standard deviation
Extent to which family planning is practiced.	3.69	0.94	3.27	0.87
Length of time practiced	3.14	0.78	2.89	1.07
Satisfaction with family planning method ...	3.14	0.56	2.84	.83

Seventy-five percent of the participating mothers stated that they used family planning methods (contraceptive pills 38 percent, intrauterine devices 42 percent, and other 20 percent) compared with 55 percent of nonparticipating mothers. Use by 60 percent of the women in child-bearing ages had been set as

the goal of the Korean national family planning program, a rate that the nonparticipants fell short of reaching. In both groups of mothers, the proportion whose husbands had had vasectomies was small, but it was higher for the participants than for the nonparticipants: 7 percent versus 3 percent.

Less than 7 percent of the participating mothers had delivered babies in the preceding year, whereas about 10 percent of the nonparticipating mothers had done so. This difference may be a result of the family planning education provided to mothers in the participating centers. In the rural areas, where the IDCP instructors distributed more family planning supplies, 84 percent of the participants, but only 49 percent of the nonparticipants, used family planning.

Table 3 shows the proportions of the participating mothers of various age groups and educational levels whose responses to questions testing their knowledge and practice of nutrition and family planning were rated good or very good. As the table shows, their knowledge and practice in both areas varied according to age group and education. The mothers younger than 30 years with high school or college educations had higher ratings than older mothers with less education. The college graduates had very high ratings, but they comprised only 5 percent of the total population of mothers.

Comparison of participants in 1973 and 1975. Table 4 shows the results of comparing the participating centers in 1973 and 1975 on four items of particular concern to the IDCP planners: the child's

Table 3. Percentage of mothers from participating day care centers whose responses to questions about nutrition and family planning were rated good or very good, by age group and educational level

Age and education	Number of mothers	Nutrition		Family planning	
		Knowledge	Practice	Knowledge and attitude	Practice
Age (years):					
Under 21	11	73	81	73	91
21-30	267	71	73	68	82
31-40	669	68	67	66	77
Over 40	82	65	62	67	72
Education:					
No schooling	30	53	66	60	67
Public school (6th grade)	298	62	68	64	67
Middle school (9th grade)	360	72	73	68	73
High school (12th grade)	299	76	75	71	75
College	42	81	76	83	90

Table 4. Comparison of participating day care centers in 1973 and 1975 in respect to 4 items of major concern to IDCP planners

<i>Items of concern</i>	<i>1973 survey</i>	<i>1975 survey</i>	<i>Difference</i>
Gross mean weight of children (kg)	16.4	17.1	0.7
Mothers rating their children as healthy (percent of mothers)..	43	89	46
Gross mean age of children when working mothers began using baby food supplemented with milk (months)	12	6	6
Mothers practicing family planning (percent)	55	75	20

weight, mother's assessment of child's general physical condition, age of child when working mother started giving child baby food, and the proportion of mothers practicing family planning. The gross mean weight of the children in 1975 was greater by 0.7 kg than the children's weight in 1973 (17.1 kg versus 16.4). In the 1975 survey, 89 percent of the mothers rated their children as healthy, a proportion far in excess of the 43 percent found in the 1973 survey. The 1975 survey also revealed that the weaning practice of the working mothers in the group had improved since 1973. In 1973, only 20 percent of the working mothers had started feeding their babies milk supplemented with baby foods on an average of 6 months after birth (as recommended by the nutrition instructors), compared with 58 percent in the 1975 survey. The increase in the proportion of mothers who reported that they were practicing family planning—54 percent in 1973 versus 75 percent in 1975—was also encouraging. Also, 7 percent of the husbands of the mothers surveyed in 1975 had had vasectomies, compared with 3 percent in the 1973 survey.

Discussion

The food service is the component of IDCP most appreciated by the mothers, probably because it is critical to their children's well-being. Nevertheless, in addition to nutritional and family planning education, other child care services need to be provided that will work parallel to the food service, such as preschool education, health care, and social services. A further study is needed to identify specific needs in each of these areas and to determine how they can be met within the capabilities of the available day care personnel and facilities.

A key issue in nutrition education is practice, but the appropriate foodstuffs must be available to the mothers. Most of the mothers in the study indicated that it was financially difficult for them to obtain ade-

quate food supplies. The nutrition education offered at the centers therefore is now being directed at the use of inexpensive, but nutritious, foodstuffs that are easily available in and around the mother's home and village. To this end, classroom activities will be centered on an experiment-practice approach.

The low intake of nutrients by children from the centers not participating in the program and the difficulty of all mothers in obtaining adequate food for their families have indicated a need for improvement of the nutrition education provided by the participating centers and for an early expansion of IDCP to more of the nonparticipating centers.

A major concern of the mothers in respect to family planning has been the accessibility of services. Mothers both from participating and nonparticipating centers expressed their willingness to use such a service at their day care center if it were provided. In areas where mothers have no easy access to a family planning service, a mobile or day clinic might be set up at the day care center in cooperation with the Planned Parenthood Federation of Korea.

The consistent differences found between the two groups of day care centers clearly suggested that IDCP, in its first 2 years of operation, was well accepted by both the children and their mothers and that expansion to include the nonparticipating centers was urgently needed.

A comparison between the 1973 baseline data and the 1975 study data for the participating centers indicated that favorable changes had taken place in four items that had been of particular concern to the IDCP planners. The comparison also revealed areas in each of the three services in the program that needed adjustment and modification.

To assess the cumulative impact of IDCP, a study needs to be done in which more extensive baseline data are used. The variations that may exist among participating and nonparticipating centers will also have to be taken into account.

The IDCP has helped the Korean day care system to reorient itself toward a more family-centered and broader based system, in which nutritional and family planning education is provided as an essential supplementary support to the family in its child-rearing responsibilities. Furthermore, IDCP demonstrated a new way of using day care facilities for multiple purposes, beneficial to all parties. What is also significant about IDCP is the continuity of its services. Mothers can be kept in the educational program as long as their children participate in IDCP. Thus, during the critical periods of childbearing and child rearing, mothers can be given nutritional and family planning education and services continuously.

The food provided at the day care centers is not sufficient to promote the sound growth of children. If other basic family problems are not attacked at the same time, the potential benefit from that food will be nullified as increasing numbers of children continue to be born and make it more difficult for families to provide proper nutrients for all of the children. All three IDCP activities must be considered when planning day care for children of low-income families.

One factor that has contributed to the favorable outcome of the first 2 years of the IDCP's operation has been that government policy was consonant with IDCP goals. Second, facilities and personnel were

available. Hundreds of orphanages that had been built during the Korean War were empty and could be turned into day care centers with minimal effort; directors of the orphanages were licensed child care workers; also, college graduates with appropriate training were available to staff the centers. Third, the practical value of IDCP was quickly accepted and appreciated by the consumers of its services. Finally, the program took advantage of the incentive generated by the food service, using it to induce the mothers to participate initially, and to continue to participate, in the educational subprograms.

References

1. Siegel, E., and Morris, N. M.: Family planning: its health rationale. *Am J Obstet Gynecol* 118: 995-1,003, April 1974.
2. Guttmacher, A. F.: Unwanted pregnancy: A challenge to mother and child. *World Health*, January 1974, pp. 6-13.
3. Wray, J. D.: Population pressure on families: Family size and child spacing. *Rep Popul Fam Plann*, August 1971, pp. 403-461.
4. Scrimshaw, N. S.: Food, health and family planning. *World Health*, January 1974, pp. 14-21.
5. CARE-Korea: The CARE K.A.P. study: A survey of day care centers. Seoul, Korea, 1973.
6. Food and Agriculture Organization-World Health Organization: Energy and protein requirements. WHO technical report series, No. 522. Geneva, 1973, pp. 35 and 74.
7. United Nations: United Nations demographic yearbook. New York, 1976, p. 365.

SYNOPSIS

SUNG, KYU-TAIK (University of Michigan): *Integrating nutritional and family planning education with food services in Korean day care centers. An evaluation. Public Health Reports, Vol. 93, March-April 1978, pp. 177-185.*

An integrated day care program (IDCP) serving children and mothers from low-income families in Korea was the first such comprehensive service to be introduced into a developing country in Asia. Therefore a review of its initial 2 years of operation seemed desirable to determine whether the program was still being accepted, whether progress was being made in respect to four items of particular concern to the program's planners, and whether the program

was headed in the right direction or readjustments in its direction were indicated.

In a comparison of the centers participating in the integrated program with the nonparticipating centers in respect to food services, nutrition education, and family planning education and practice, the participating centers scored much better. When 1975 data for the participating centers was compared with 1973 data for these centers in respect to the four items of particular concern, the participating centers scored substantially better in 1975.

The food services in the participating centers generated an incentive that induced the mothers of the day care children to participate initially—and to continue to participate—in the nutrition and family planning

subprograms that the centers offered.

By means of the integrated program, day care in Korea has evolved into a new form, providing a broader range of services, more supportive of both children and mothers than the more limited care offered in other day care centers in the country. The IDCP has also demonstrated how day care facilities already in operation can change direction to respond to the emerging needs of children, mothers, and society at large.

Results of the evaluation suggest that whenever day care for children from low-income families is being planned, consideration should be given to the beneficial interrelationships that it is possible to establish between food services for the children and education of their mothers in nutrition and family planning.